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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,004	07/23/2001	Moo-Youn Park	5000-1-214	3695

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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/911,004	PARK, MOO-YOUN	
	Examiner	Art Unit	
	Daniel J Petkovsek	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment received November 17, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment received November 17, 2003. In accordance with the amendment, new claim 12 has been added. It is noted that new claim 12 should be listed as "New", not as "Original", as filed by Applicant.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4, 8-10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Bhatia et al. U.S.P. No. 6,269,208.

Bhatia et al. U.S.P. No. 6,269,208 teaches (Figs. 1 and 4, column 3 lines 9-33, column 6 line 53 through column 7 line 5) an apparatus (and method of using same) for fabricating an optical fiber grating comprising: a collective light source (16 and 20 combined) to project light perpendicularly to a fiber, a mask 40, a lens 24 disposed between the source and the fiber for focusing the light, and a mobile lens 36 (in the z direction) for diverging light and thus changing the period of the optical fiber grating (see column 53-57, column 3 lines 9-33), which clearly, fully meets Applicant's claimed limitations.

Regarding claim 3, the light image of Bhatia et al. '208 changes as the lens 36 moves. Regarding claims 4, 9 and 10, the mask is spaced a pre-determined distance apart

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from the fiber, and has an array of elongated openings. Regarding claim 12, focusing would move the lens in either direction.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5-7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia et al. U.S.P. No. 6,269,208.

Bhatia et al. U.S.P. No. 6,269,208 teaches (Figs. 1 and 4, column 3 lines 9-33, column 6 line 53 through column 7 line 5) an apparatus (and method of using same) for fabricating an optical fiber grating comprising: a collective light source (16 and 20 combined) to project light perpendicularly to a fiber, a mask 40, a lens 24 disposed between the source and the fiber for focusing the light, and a mobile lens 36 (in the z direction) for diverging light and thus changing the period of the optical fiber grating. Bhatia et al. '208 does not explicitly teach the use of concave lenses or an integrated multi-period mask.

Although not explicitly taught, since the use of concave lenses to diverge light signals is well known in the art, and Bhatia et al. '208 diverges and converges light signals, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a concave lens to diverge the light signal in the photo induced grating of Bhatia et al. '208. Although not explicitly taught, since multi-period masks are well known in the art, it would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to use an integrated multi-period mask in order to have the functionality to create a wide variety of different periods in the gratings.

Response to Arguments

5. Applicant's arguments filed November 17, 2003 have been fully considered but they are not persuasive.

Applicant traverses the rejection of claims 1, 3, 4, 8-10 and 12 under 35 U.S.C. 102(e), and claims 2, 5-7, and 11 are rejected under 35 U.S.C. 103(a) by stating that the Bhatia et al. '208 reference does not teach or reasonably suggest "a mobile lens ... for changing the period of the optical fiber grating". This argument is not persuasive, since the focusing optics 122 of Bhatia et al. '208 are used for the purpose of focusing an optical signal by using lenses. It is well known that fine-tuning and adjustment of focusing optics and lenses would result in the motion/movement of these lenses in order to create the correct focusing signals to be transmitted. Also see column 1, line 65 through column 2, line 5 for statements about changeable distances between lenses and masks. Making a lens moveable for focusing purposes is not novel in the art.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of long period optical fiber gratings and the making thereof: U.S.P. No. 6,628,863 to Jang.

7. **THIS ACTION IS MADE FINAL.** The rejection to newly added claim 12 was necessitated by the amendment received November 17, 2003. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.



Daniel Petkovsek
February 4, 2004



Brian Healy
Primary Examiner